

IN THE CLAIMS

1. (Currently amended) A ~~destination~~network card of a rack system, comprising:
a ~~physical buslink~~ interface adapted to connect to a backplane ~~buslink~~ of the rack system;
a data interface adapted to transmit data signals through the ~~linkbus~~ interface onto ~~downlink lines of the backplane linkbus~~; and
a controller adapted to periodically ~~determine a generate~~ bandwidth allocation signals ~~indicating allocation of time slots of uplink lines of the backplane buslink to data signals of a plurality of different formats, and adapted to transmitting bandwidththe allocation signals indicating the determined allocation through the buslink interface on same the backplane bus, on same bus link lines on which used by the data interface transmits data signals.~~
2. (Currently amended) A ~~network~~ card according to claim 1, wherein the controller receives need indications from other cards of the rack system through the ~~buslink~~ interface and generates the bandwidth allocation signals responsive to the received need indications.
3. (Currently amended) A ~~network~~ card according to claim 1 ~~or claim 2~~, wherein the controller performs the allocation repeatedly in predetermined intervals.
4. (Currently amended) A ~~network~~ card according to ~~any of claims 1-3~~claim 1, wherein the controller performs the allocation repeatedly in intervals of between about 0.125 msec and 1 msec.
5. (Currently amended) A ~~network~~ card according to claim 1 ~~any of the preceding claims~~, wherein at least two of the allocated time slots have different sizes.
6. (Cancelled)
7. (Currently amended) A ~~network~~ card according to claim 4 ~~any of the preceding claims~~, wherein the backplane bus comprises a standard TDM Telecom bus.
8. (Currently amended) A ~~network~~ card according to claim 1 ~~any of the preceding claims~~, wherein the allocation signals comprise packets that relate to a plurality of slots.

9. (Currently amended) A ~~network~~ card according to claim 1 ~~any of the preceding claims~~, wherein the ~~bus-link~~ interface includes an Ethernet physical layer interface.

10. (Cancelled)

11. (Currently amended) A ~~network~~ card according to claim 10, wherein the data interface is adapted to receive signals in accordance with a plurality of different formats.

12. (Currently amended) A ~~network~~ card according to claim 11, comprising a data distributor adapted to forward the received signals according to their format.

13. (Currently amended) A ~~network~~ card according to claim 12, wherein the data distributor identifies the format of received signals by examining a header of an encapsulation packet of the signals.

14. (Currently amended) A ~~network~~ card according to claim 12, wherein the data distributor identifies the format of received signals according to the slot in which they were received.

15-20. (Cancelled)

21. (Currently amended) A ~~network~~ card according to claim 12, wherein the data interface is adapted to receive signals in accordance with a plurality of different formats.

22. (Currently amended) A ~~network~~ card according to claim 21, wherein the signals of the plurality of different formats are encapsulated in packets of a single format.

23. (Currently amended) A network card according to claim 1 ~~of a rack system~~, comprising:
—— ~~a link interface adapted to connect to a backplane link of the rack system;~~
—— ~~a data interface adapted to receive data signals through the link interface from the backplane link;~~

a network bus interface for transmitting data signals received by the data interface onto a network bus; and wherein the a-controller is adapted to generate control signals regulating the use of the backplane link, for transmission to other cards connected to the backplane link, the control signals being timed responsive to the bandwidth of the network bus, such that the signals received by the data interface can be forwarded onto the network immediately upon receipt without queuing.

24. (Currently amended) A network card according to claim 23, wherein the destinationnetwork card does not include a buffer for more than currently handled signals received by the data interface.

25. (Currently amended) A network card according to claim 23 ~~or claim 24~~, wherein the backplane link comprises a bus.

26. (Currently amended) A network card according to claim 23 ~~or claim 24~~, wherein the backplane link comprises a star configuration link.

27-34. (Cancelled)

35. (Original) A method of transmitting signals on a backplane bus, comprising:
receiving signals in a plurality of formats, by a first card connected to the backplane bus;
encapsulating at least some of the signals into a format allowing large packets of a size above 500 bytes, by the first card;
transmitting the encapsulated signals to a second card connected to the backplane bus; and
removing the encapsulation from at least some of the encapsulated signals, by the second card.

36. (Original) A method according to claim 35, wherein the plurality of formats include at least one of the TDM format, the ATM format and the token ring format.

37. (Currently amended) A method according to claim 35 ~~or claim 36~~, wherein the encapsulating includes adding a header.

38. (Currently amended) A method according to ~~any of claims 35-37~~claim 35, wherein the encapsulating includes encapsulating into the Ethernet format.
39. (Currently amended) A method according to ~~any of claims 35-38~~claim 35, wherein the first card comprises a line card and the second card comprises a network card.
40. (Currently amended) A method according to ~~any of claims 35-39~~claim 35, comprising forwarding the signals from which the encapsulation was removed, onto a network link.
41. (Currently amended) A method according to ~~any of claims 35-40~~claim 35, comprising adding an encapsulation to the signals forwarded onto the network link.
42. (Original) A method of upgrading a rack system, comprising:
providing a rack system including at least one network card and at least one line card, which operate in accordance to a single signal format;
replacing the network card with a network card that supports operation in accordance with a plurality of formats; and
adding one or more line cards which operate in accordance with a method allowing transmission in accordance with a plurality of formats, while leaving in the rack system one or more of the at least one single format line card.
43. (Original) A method according to claim 42, wherein the single signal format comprises the TDM format.
44. (Original) A method according to claim 42, wherein the single signal format comprises the Ethernet format.
45. (Currently amended) A method of transmitting signals ~~between a line card and a network card~~, comprising:
transmitting data signals from ~~at the network~~ destination card to a ~~source~~line card over a downlink communication link;

transmitting allocation signals indicating allocation of time slots of the communication link, on same link lines used for transmitting the data signals from the destination card to the source card; and

transmitting data signals from the source~~line~~ card to the destination~~network~~ card in time slots allocated to the source~~line~~ card in the allocation signals.

46. (Original) A method according to claim 45, wherein the communication link comprises a backplane bus.

47. (Currently amended) A method according to claim 45, wherein the source~~line~~ card and the ~~network~~destination card are not included in a same rack.

48. (New) A method according to claim 45, wherein transmitting the data signals comprises transmitting signals of a plurality of different formats.

49. (New) A card according to claim 1, wherein the backplane link comprises a backplane bus.

50. (New) A card according to claim 1, wherein the backplane link comprises a star configuration link.

51. (New) A card according to claim 1, wherein the controller is adapted to allocate slots of a plurality of different sizes.

52. (New) A card according to claim 51, wherein the controller is adapted to select the sizes of the allocated slots responsive to the types of signals the slots are to carry.

53. (New) A card according to claim 1, wherein the bandwidth allocation signals identify the types of signals to be transmitted in at least some of the slots.

54. (New) A card according to claim 1, wherein the bandwidth allocation signals identify, for at least some slots, a specific queue to receive the slot.

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55. (New) A card according to claim 1, wherein the bandwidth allocation signals indicate a general rule with instructions on how the slots allocated to a source card are to be divided between clients of the source card.

56. (New) A card according to claim 55, wherein the bandwidth allocation signals indicate when signals of a client are to be discarded.

57. (New) A card according to claim 55, wherein each client of the source card has an agreed green bandwidth provided at all times and an allocated yellow bandwidth provided when available, and wherein the bandwidth allocation signals indicate a percentage of the agreed yellow bandwidth to be allocated to the clients.

58. (New) A rack system, comprising:

- a chassis including a backplane link;

- a destination card according to claim 1; and

- a plurality of source cards, adapted to transmit to the destination card over the backbone link, data signals in accordance with a plurality of different formats.